

CLAIMS:

1. A lithium based battery comprising;
a cell structure group formed by stacking unit cells
5 each including a positive electrode, a negative electrode,
and a separator interposed therebetween, or formed by
repeatedly folding or winding an integral body of said unit
cells;
a battery container for containing said cell structure
10 group; and
an electrolyte, which is poured in said battery
container after said cell structure group is contained in
said battery container;
wherein the outer peripheral surface of said battery
15 container is covered with an ion impermeable and extensible
high polymer sheet having a tensile elongation percentage of
1 % or more.
2. A lithium based battery comprising:
20 a cell structure group formed by stacking unit cells
each including a positive electrode, a negative electrode,
and a separator interposed therebetween, or formed by
repeatedly folding or winding an integral body of said unit
cells; and
25 an electrolyte;
wherein the outer periphery of said cell structure
group is covered with an ion impermeable and extensible high
polymer sheet having a tensile elongation percentage of 1 %
or more.
- 30
3. A lithium based battery comprising:
a cell structure group formed by stacking unit cells
each including a positive electrode, a negative electrode,
and a separator interposed therebetween, or formed by
35 repeatedly folding or winding an integral body of said unit
cells;

a battery container for containing said cell structure group; and

an electrolyte, which is poured in said battery container after said cell structure group is contained in
5 said battery container;

wherein the outer peripheral surface of said battery container is covered with an ion impermeable and extensible high polymer sheet having a tensile elongation percentage of 1 % or more, and also the outer periphery of said cell
10 structure group is covered with said ion impermeable and extensible high polymer sheet.

4. A lithium based battery comprising:

a cell structure group formed by stacking unit cells
15 each including a positive electrode, a negative electrode, and a separator interposed therebetween, or formed by repeatedly folding or winding an integral body of said unit cells;

a battery container for containing said cell structure
20 group; and

an electrolyte, which is poured in said battery container after said cell structure group is contained in said battery container;

wherein said positive electrode and said negative
25 electrode of each of said unit cells are respectively formed on one surface of a positive collector and one surface of a negative collector in such a manner as to face to each other with said separator put therebetween; and

an ion impermeable and extensible high polymer sheet
30 having a tensile elongation percentage of 1 % or more is disposed between adjacent two of said unit cells and/or on the outer peripheral surface of each of said unit cells.

5. A lithium based battery according to any one of claims
35 1 to 3, wherein said positive electrode and said negative electrode of each of said unit cells are respectively formed on one surface of a positive collector and one surface of a

negative collector in such a manner as to face to each other with said separator put therebetween; and

an ion impermeable and extensible high polymer sheet having a tensile elongation percentage of 1 % or more is
5 disposed between adjacent two of said unit cells and/or on the outer peripheral surface of each of said unit cells.

6. A lithium based battery according to any one of claims 1 to 5, wherein said extensible high polymer sheet is made
10 from at least one kind selected from a group consisting of a polyamide based elastomer, a polyurethane based elastomer, a polyolefin based elastomer, a polyester based elastomer, a styrene based elastomer, a vinyl chloride based elastomer, and a fluorine based elastomer.

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